NOTE XXXVIII.

ON TWO VERY RARE, NEARLY FORGOTTEN AND OFTEN MISUNDERSTOOD MAMMALS FROM THE MALAYAN ARCHIPELAGO.

BY

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Pithechir melanurus S. Müller. (Plate 9).

Among other papers and drawings belonging to the inheritance of the lamented Alfred Duvaucel, there was a drawing of an animal, reproduced in the well known splendid work entitled »Histoire naturelle des Mammifères", and described after that drawing by Mr. F. Cuvier.

Cuvier called the animal »le Pithéchéir ou Pithéchir mélanure" and characterized it in the following terms: » ce Mammifère se rapproche des Rats et des Sarigues, sans toutefois pouvoir être réuni intimement ni à l'un ni à l'autre de ces genres. La tête et la queue rappellent la tête et la queue des Rats, tandis que les pieds de derrière et un peu la tête rappellent les Pédimanes américains. Mais les pouces, très-séparés aux pieds de derrière, avec un ongle plat, et ceux des pieds de devant, quoique très courts, garnis aussi d'ongles aplatis et paraissant également opposables aux autres doigts, ne permettent pas d'admettre cet animal parmi les Rats; on ne peut pas davantage le considérer comme une Sarigue, à cause de ce pouce des membres antérieurs et de sa queue non prenante. D'après ces caractères, tirés des organes du mouvement, le Pithéchéir nous présenterait le type d'un genre nouveau, et

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probablement de l'ordre des Rongeurs ou de la famille des Pédimanes; mais cette question restera douteuse jusqu'à ce qu'on ait connaissance de son système de dentition. Les couleurs de son pelage, d'un beau fauve uniforme et sa queue noire l'éloignent également des genres dont nous venons de parler. En effet, toutes les espèces qui constituent ces genres sont revêtues d'un pelage terne, et elles sont en assez grand nombre pour qu'on puisse en induire qu'il n'est pas dans leur nature qu'elles soient revêtues d'un pelage brillant.

Je puis indiquer ni la taille de cet animal ni sa patrie. Sous le premier rapport, en le jugeant par analogie, nous lui donnerions la taille d'un grand Rat. Quant aux contrées où il vit et où il se trouvera sans doute un jour, j'ai lieu de présumer, de l'époque où il m'est parvenu et des peintures qui accompagnaient la sienne, qu'il est originaire des provinces du Nord de Bengale, si ce n'est des parties occidentales de Sumatra (Février 1833)."

The colored figure which accompanies Cuvier's clear and elegant description is indicated as being »de grandeur naturelle". From the foregoing the questions arise, 1° as to the true habitat of the animal, 2° its size, 3° if it is a Rodent, a Marsupial or if it belongs to another order. and finally, 4° if Duvaucel's figure accurately represents the animal? It generally is an unknown fact, that, meanwhile the Pithéchir mélanure is not to be found represented in any other Museum, there are two well preserved specimens in the Leyden Museum. These individuals have been collected in 1834 by S. Müller, the zealed member of the so called Natuurkundige Commissie (Physical Commission). This most interesting discovery has been mentioned in a few words by S. Müller in the first part of the » Verhandelingen over de natuurlijke Geschiedenis der Nederlandsche Overzeesche bezittingen, Zoologie, 1839, p. 36"; we read there: » we procured a specimen of the red bushrat, figured by Fr. Cuvier as Pithéchir mélanure, in Java, to the northern side of Mount Gédé, at an elevation of about 1600 me-

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ters above the level of the sea; the people were felling a tree, in a hollow branch of which the animal had its nest, made from moss and wherein it apparently had been sleeping and so we get it by chance." In an enumeration of the collected animals l. c. the named author (Dr. S. Müller) called the species Pithechir melanurus. — Our second specimen is from Sumatra and was likewise collected by S. Müller. Although I always and again and again have fixed the attention of officers, collectors and travellers upon the animal in question and often supported their memory by colored drawings, nobody has been happy enough to procure nor even to observe it.

Professor Schlegel twice mentioned the species, viz.: in »Handleiding tot de beoefening der Dierkunde, 1857, T. I, p. 70", where he said that it is an animal from Java and Deccan, and in »De Dierentuin, 1872, p. 77", with the localities Java and Hindostan.

Mr. Paul Gervais (Histoire naturelle des Mammifères, 1854, T. I, p. 275) gives a very bad reproduction of Cuvier's fine colored plate, calls the genus » Pithecheirus Cuvier" and the species » Pithecheirus melanurus Cuvier" (Cuvier has not given a latin or greek title to our animal before the year 1842 (table générale, p. 4), when he called the species Pithecheir melanurus, but Dr. S. Müller, see antea) and remarks: » à en juger par la figure due à Duvaucel, le Pithéchéir me semble avoir bien plus d'analogie avec les Ptilocerques qu' avec les Rongeurs, mais je ne puis donner à l'appui de ce rapprochement aucune observation précise, n'ayant observé le Pithéchéir dans aucun des Musées que j'ai visités." If Mr. Gervais had paid a » visite" to the Leyden Museum before making such an improbable hypothesis, he would have seen two specimens of the species in question!

Professor J. van der Hoeven wrote a short paper concerning our animal, in 1859, »Verslagen en Mededeelingen der Koninklijke Akademie van Wetenschappen, deel 9, p. 50", translated in Annals and Magazine of natural history, 1859, Vol. III, p. 470. Prof. van der Hoeven mentions both specimens in our collection and made the following

ingenious and exact remarks: that the tail is not black so that the name *melanurus* is not applicable to the animal, that the Java-specimen has the belly whitish, that the skull is wanting; and he suggested that the teeth must resemble those of other species of the genus Mus: moreover v. d. Hoeven gives some measurements of body and tail.

Dr. Trouessart (Catalogue des Mammifères vivants et fossiles, Rongeurs, 1881, corrigenda) accepted Gervais' statement, called the *Pithechir melanurus* S. Müller, *Pithecheirus melanurus* F. Cuvier, and did not mention the well-known » Verhandelingen."

There is in the Berlin Museum a small mouse, described and figured by Professor Peters in 1868 (Monatsb. d. kön. Preuss. Akad. d. Wissensch. zu Berlin, p. 448, pl. 1), from an unknown locality (der Fundort ist wahrscheinlich in Africa zu suchen). Peters bestowed upon it the name of Chiropodomys penicillatus. Dr. Trouessart (l. c.) remarked: » M. le Professeur Peters de Berlin nous informe que le Chiropodomys penicillatus est identique au Pithecheirus melanurus de Fr. Cuvier, et que, selou toute probabilité, la patrie de cette espèce est bien Java et non l'Afrique ouest." I have seen this little creature and could convince myself and Dr. Peters too that it has nothing to do with our P. melanurus, as it is nearly fullgrown (see the dentition in Peters' figures) and attains about half the size of the latter; moreover Peters said »cauda pilis setaceis brevibus, versus apicem longioribus vestita" (see the tail in Peters' figure) meanwhile P. melanurus has not a trace of a tufted tail, a. s. o.

It is a fact avowed by every naturalist, that the Leyden Museum contains one of the largest collections of the whole world, and it is a fact too well known and deplored by all zoologists, that the number of scientific men, assigned to preserve and to study those immense collections, is inferior to that of the scientific workers in the entomological department of the British Museum. And if therefore for our scientific staff it at present is an impossibility to

survey all our invaluable treasures, it will be somewhat comprehensible, how the things stand in our Museum some 30, 40 years ago, when the scientific workers were still less in number than at present, and just at that time the collections were increasing day by day!

Under such bad circumstances a great deal of work remained undone and many valuable specimen was getting away or lost for ever! Several years successively Prof. Schlegel had all the Vertebrates under his charge! It therefore was no wonder that I found in 1875 several hundred skulls, belonging to stuffed mammals; these skulls were uncleaned and not always carefully labeled. In the course of years I happened to bring order in that mass, although as a matter of course not always without mistakes, and so merely a couple of dozens still remained undetermined. Among the latter my friend Oldfield Thomas from the British Museum met with two skulls labeled »Java and Sumatra. 1834" and bearing the same marks as the stuffed specimens of P. melanurus in the collection, and with a very high grade of probability I labeled these skulls as belonging to our specimens of the named species, and exhibited them under that name in my Catalogue ostéologique, 1887, p. 215, although with a note of interrogation.

Having not detected in our Museum other Mice-specimens to which these skulls may belong, I now am convinced that we have here the two wanting skulls of the stuffed specimens of *P. melanurus*. The skull of the Java-specimen has been reproduced on plate 9, fig^s 1, 2, 3 and 4.

The following measurements are those of the Java 1) specimen, in millimeters:

¹⁾ In v. d. Hoeven's paper is a mistake corrected, not correctly however, in the english translation. V. d. Hoeven writes in dutch, l. c. p. 52: "het voorwerp van Sumatra is 0.360 lang, waarvan de kop ongeveer 0.048 inneemt, de staart 0.175. Het grootere voorwerp van Sumatra is lichter ros gekleurd." This has been translated in A. M. N. H. 1859, p. 471 thus: "The specimen from Java is... The larger specimen from Sumatra is of a lighter red colour."

	Head and	body .												209
	Tail													186
	Hind foot	with c	laws											30
	Ear												٠	15
	Length of	skull.												41
	Greatest b	readth												22
	Length of	upper	mola	ı.	seri	es.								9
	Distance	$_{ m between}$	upp	er	inc	iso	r a	nd	fir	st	mo	lar		11
	Incisors s	mooth,	up	per	in	cis	ors	or	ang	ge	colo	red	Ι,	lower
01	es yellow.													-

Fur very long and very soft to touch; hairs of belly uniformly reddish white in the Sumatra-specimen, pure white in the Java-specimen: all the other hairs have their basal half dark mouse-color and their terminal half more or less reddish (fauve apud Cuvier): the tail is reddish, perhaps decolored; ears and feet reddish, nails horn-brown. For the rest 1 refer to Cuvier and v. d. Hoeven. From all what has been reported concerning it, we may now conclude, that Pithechir melanurus S. Müller lives in Sumatra and West-Java, that Duvaucel's drawing represents the animal in its natural size and has been satisfactorily accurate drawn, and finally that the animal is a true Mouse.

NB. There is in the »Bijdragen tot de Dierkunde van Natura Artis Magistra, Feestnummer, Amsterdam, 1888" a paper, written by Mr. K. N. Swierstra, one of the members of the scientific staff of that splendid institution, and entitled »Naamlijst van levende dieren, 1838—*1888." On p. 15 of that paper the author states that in 1871 lived in the named Zoological Garden a specimen of Pithicheirus melanurus from East-Java, Padjarakan. I am imformed by Mr. Swierstra that unhappily that animal has not been

The specimen from Java however is the largest and the lightest colored and has the white belly (see also v. d. Hoeven, p. 51 and A. M. N. H. p. 471), therefore the correction in A. M. N. H. should have been as follows: "The specimen from Sumatra is... The larger specimen is from Java and of a lighter red colour."

preserved in the Museum and that nobody knows anything about its fate. If the animal has not been confounded with another, then East-Java is a third locality for this most interesting species.

Dr. Kerbert, Director of Natura Artis Magistra at Amsterdam kindly informed me that the named Zool. Society received on October 22, 1870 a living mouse, presented by Mr. van Vloten from Padjarakan, a sugar-manufacture in the Probolingo Residency, East Java and registered by Dr. Westerman as *Pithecheir melanurus?* and that the individual truly has been lost.

Tupaja dorsalis Schlegel.

There are in our Museum two small Tupaja-specimens, being the types of Tupaja dorsalis described and figured in 1857 by Professor Schlegel (Handleiding tot de beoefening der Dierkunde, deel 1, p. 59, plaat III, fig. 31) in these terms: **Tupaja dorsalis** from Borneo has a slender tail and a black stripe on the back." In 1872 Professor Schlegel again described and figured it (De Dierentuin van het Kon. Zool. Gen. Natura Artis Magistra, Mammalia, pp. 61 and 62). This also very short description runs as follows: **In another species from Borneo, Tupaja dorsalis*, the tail is more slender (than in Tupaja tana) and the back is lengthwise adorned with a black stripe."

Having extracted the skull from one of the typical specimens, I saw that it was not yet fullgrown and supposing that the difference in color between them and T. tana (in tana likewise the deep black stripe on the back is very well developed, although only from between the ears to halfway the back) would merely be due to age, I exhibited Schlegel's species as young specimens of the latter species in my Catalogues (Cat. Ost. 1887, p. 240 and Cat. Syst. 1888, p. 116). Shortly afterwards however a more accurate study convinced me that I was in error and I now will try to expose the grounds upon which

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my belief in the validity of *Tupaja dorsalis* Schlegel is based.

I already remarked that the specimens are not yet full-grown, indeed in both rami the penultimate upper premolar of the milk dentition still is present although pushed aloft by the permanent premolar, which is very good to see, meanwhile in the lower jaw the hindmost premolar has not yet attained its full development. For the rest the teeth and their relative position in the jaws do not materially differ from the same organs in *Tupaja tana*; the dimensions of the skull like those of the teeth are generally smaller than in that species; the difference in size however is important enough for specific distinction, as may be obvious from the following measurements in millimeters:

		T.	tana. 1)	T. dorsalis
Length of skull			66	48
» » lower jaw .			43	33
Across zygomatic arches			30	21
Length of bony palate.			36	26
» » nasal bones.				18

The skull of *I. dorsalis* has the slender elongate form as the same part of *T. tana*, and herein greatly differs from *T. ferruginea*, *javanica* and other *Tupaja's*.

The fur is very soft: the moderately long fur of the upperparts of the body abruptly about half way the sides of the body turns in much shorter and adpressed fur of the underparts. The fur of the upperparts has a rufous brown tinge, browner and more or less grizzled towards the anterior half of the back and fore-legs: the basal part of each hair is of a dark mouse-color. From a point between the ears runs a very good developed deep black stripe along the spine of the back to the base of the tail. The shoulder-stripe is yellowish white. The hairs of the belly and chest are entirely reddish white or white along the middle; the sides of the belly have a more brownish red

¹⁾ Skull c of my Catalogue ostéologique.

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tinge. The tail is very slender; its hairs are rather short, the longest measure about 15 millimeters.

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Length	of	head and	body		٠					185
»	>>	tail with	tuft.						٠	165
>>	>>	hindfoot	with	claw	s.					40

Our two typical specimens agree exactly in size and color with each other.

They have been collected by Schwaner, one of the members of the old »Natuurkundige Commissie", in North Western Borneo, in the neighborhood of the Kapoeasriver. My friend Oldfield Thomas kindly informed me that the British Museum has received from Mr. A. H. Everett one specimen from Baram, East Sarawak, and two from Mount Penrisen, West Sarawak.